

AN1458 (AN6572), AN1458S, AN6571

Dual Operational Amplifiers

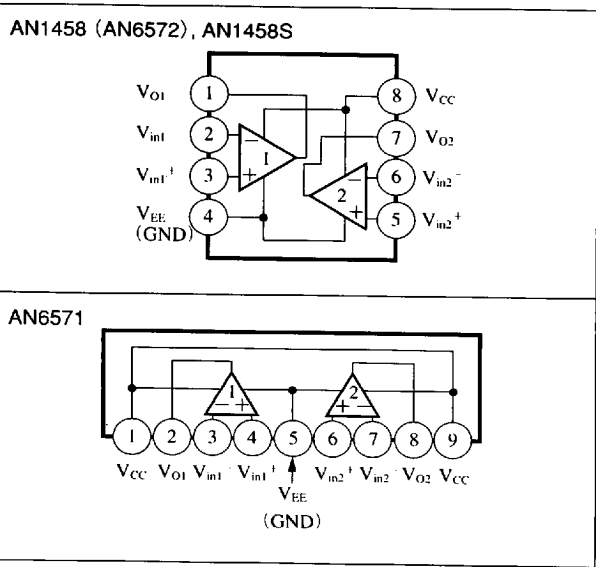
Overview

The AN1458 (AN6572), the AN1458S, and the AN6571 are dual operational amplifiers with phase compensation circuits built-in and also an output short-circuit protection built-in, so that they are highly stable and can be used widely in various electronic circuits.

Features

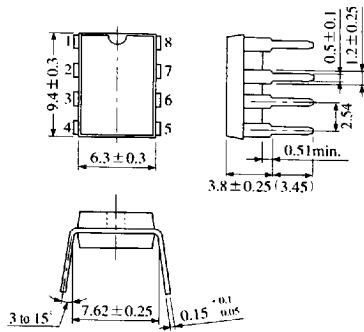
- Built-in phase compensation circuit
- Wide range of common-mode input voltage, no latch-up
- Built-in short-circuit protection
- Low input offset voltage : $V_{I\text{ (offset)}} = 0.5\text{mV typ.}$
- Low input offset current : $I_{IO} = 10\text{nA typ.}$

Block Diagrams



AN1458 (AN6572)

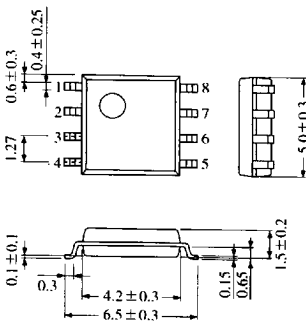
Unit : mm



8-pin DIL Plastic Package (DIP008-P-0300A)

AN1458S

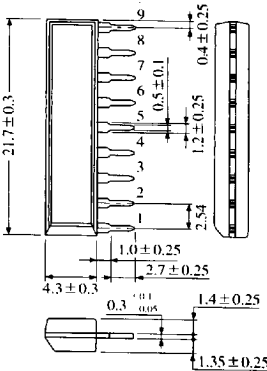
Unit : mm



8-pin PANAFLAT Plastic Package (SOP008-P-0225A)

AN6571

Unit : mm



9-pin SIL Plastic Package (SIP009-P-0000A)

Operational Amplifiers

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Pin Descriptions

AN1458 (AN6572), AN1458S

Pin No.	Pin name
1	Ch.1 output
2	Ch.1 inverting input
3	Ch.1 non inverting input
4	V _{EE} (GND)
5	Ch.2 non inverting input
6	Ch.2 inverting input
7	Ch.2 output
8	V _{CC}

AN6571

Pin No.	Pin name
1	V _{CC}
2	Ch.1 output
3	Ch.1 inverting input
4	Ch.1 non inverting input
5	V _{EE} (GND)
6	Ch.2 non inverting input
7	Ch.2 inverting input
8	Ch.2 output
9	V _{CC}

Absolute Maximum Ratings (Ta=25°C)

Parameter		Symbol	Rating	Unit
Voltage	Supply voltage	V _{CC}	± 18	V
	Differential input voltage	V _{ID}	± 30	V
	Common-mode input voltage	V _{ICM}	± 15	V
Power dissipation	AN1458 (AN6572), AN6571	P _D	500	mW
	AN1458S		360	
Operating ambient temperature		T _{opr}	− 20 to + 75	°C
Storage temperature	AN1458 (AN6572), AN6571	T _{stg}	− 55 to + 150	°C
	AN1458S		− 55 to + 125	

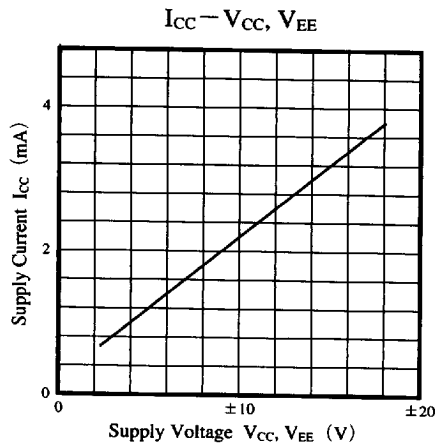
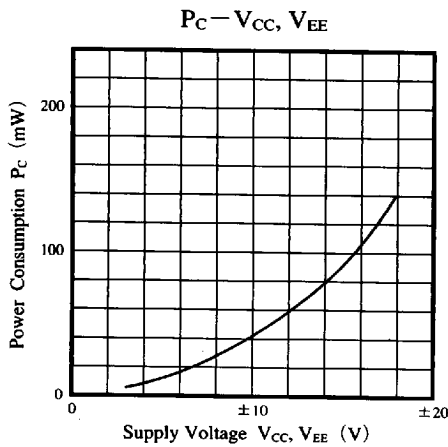
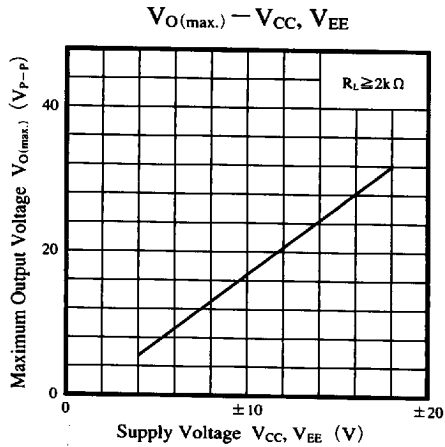
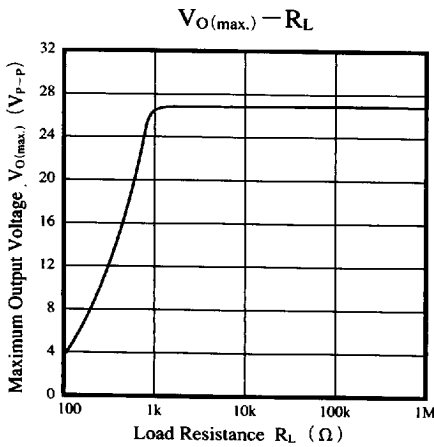
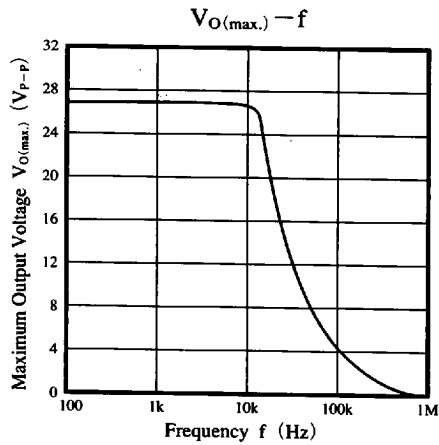
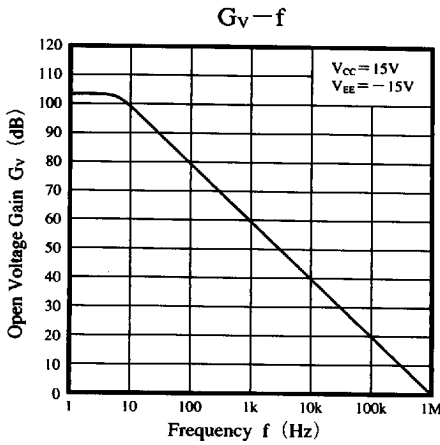
Electrical Characteristics (V_{CC}=15V, V_{EE}=−15V, Ta=25°C)

Parameter	Symbol	Condition	min	typ	max	Unit
Input offset voltage	V _{I(offset)}	R _S ≤10kΩ	—	0.5	4	mV
Input offset current	I _{IO}		—	10	100	nA
Input bias current	I _{bias}		—	50	250	nA
Voltage gain	G _V	R _L ≥2kΩ, V _O =±10V	86	106	—	dB
Maximum output voltage	V _{O(max.)}	R _L ≥10kΩ	± 12	± 14	—	V
		R _L ≥2kΩ	± 10	± 13	—	V
Common-mode input voltage width	V _{CM}		± 12	± 13	—	V
Common-mode rejection ratio	CMR	R _S ≤10kΩ	70	90	—	dB
Supply voltage rejection ratio	SVR	R _S ≤2kΩ	—	3	150	μV/V
Supply current	I _{CC}	R _L =∞	—	—	5.6	mA
Power consumption	P _C	R _L =∞	—	—	170	mW
Output short-circuit current	I _{O(short)}		—	± 20	—	mA
Slew rate	SR		—	0.7	—	V/μs

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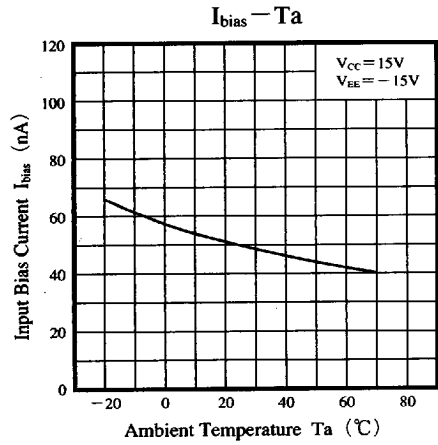
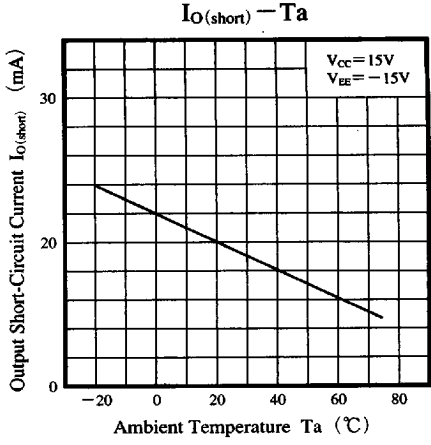
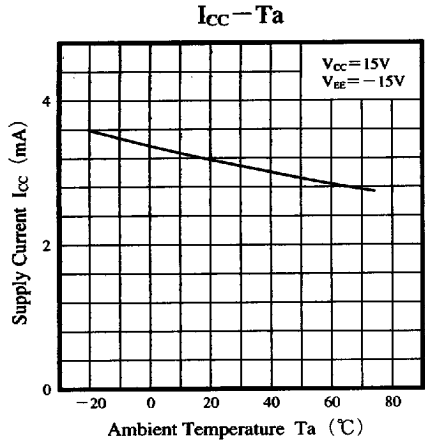
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■ Characteristics Curve



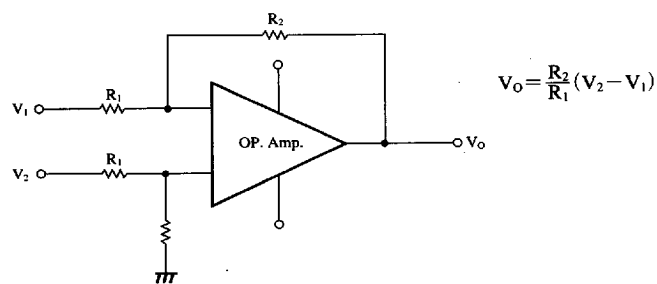
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■ **Application Circuit**

Differential Amplifier Circuit



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